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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/941,027	ALLPRESS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Linda Wong	2634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/31/2005.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|   | 9. <input checked="" type="checkbox"/> Other <u>DRAWING FIGS 7 and 8</u>              |

**A feed-forward filter and a feedback filter of an associated decision feedback equalizer having coefficients computed:**

- a) from the channel response considered in a time-forward manner, if the channel is minimum phase, or
- b) from the channel response considered in a time-reversed manner, if the channel is maximum phase; and

**A data processor for processing the signal data:**

- a) in a time-forward manner, if the channel is minimum phase, or
- b) in a time-reversed manner, if the channel is maximum phase.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**

## EXAMINER'S REASON FOR ALLOWANCE

### *Drawings*

1. The drawings were received on 01/31/2005. These drawings are accepted.
2. The following changes to the drawings have been approved by the examiner:

**Figures 7 and 8 required Prior Art labels. Labels have been added to the figures.** In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### *Allowable Subject Matter*

3. **Claims 1-15** are allowed over prior art.

The following is an examiner's statement of reasons for allowance:

Liu et al discloses a bidirectional decision feedback equalizer performing equalization in time-forward and time-reverse manner based on whether the error signal is above or below a threshold. Liu et al does not disclose performing a time-forward and time-reverse manner based on a maximum or minimum phase.

Wallace et al. discloses a equalizing system that performs time-reverse and time-forward equalization based on a threshold. Wallace et al does not discloses performing a time-forward or time-reverse manner based on a minimum or maximum phase.

The novelty of the invention are the following:

**An improved decision feedback equalizer apparatus for use with minimum and maximum phase channel responses, the apparatus comprising:**

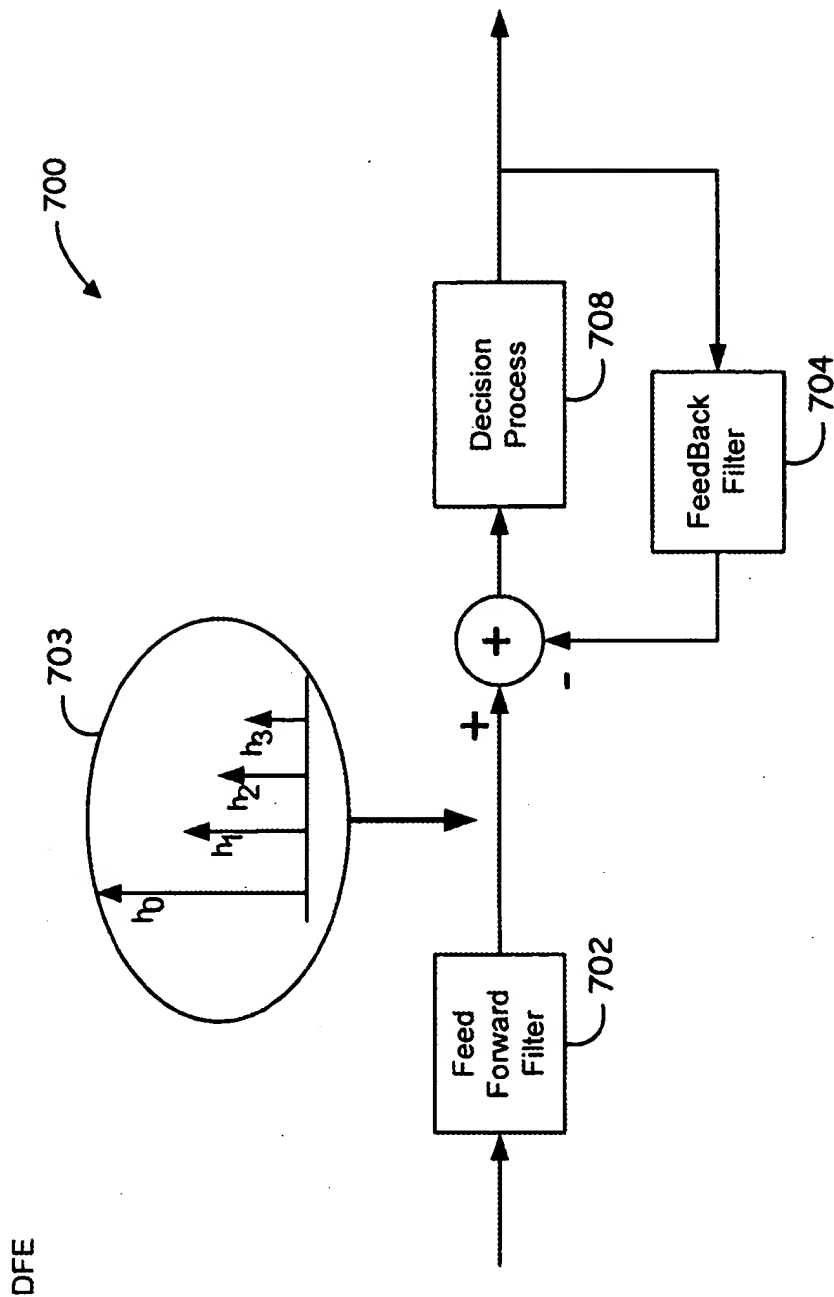


Fig. 7 (PRIOR ART)

REPLACEMENT  
SHEET

TITLE: DECISION FEEDBACK EQUALIZER FOR  
MINIMUM AND MAXIMUM PHASE ...  
INVENTOR: ALLPRESS  
APPLICATION NO.: 09/941,027,  
CONF. NO. 5720; DOCKET NO. 13153US02  
ATTORNEY: JAW, PHONE: 312-775-8000

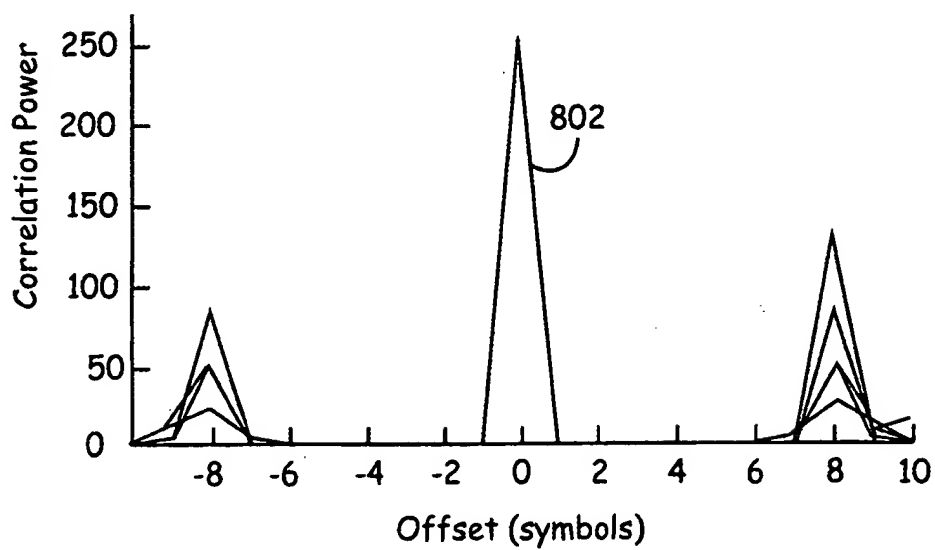


Fig. 8 (PRIOR ART)